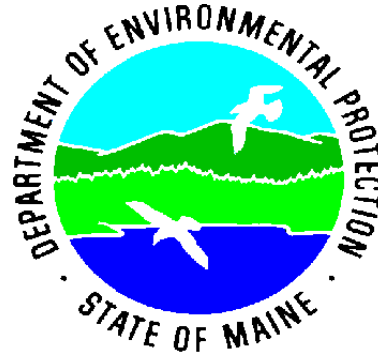


1998 ANNUAL REPORT

DIVISION OF REMEDiation BUREAU OF REMEDiation & WASTE MANAGEMENT



Division staff continue to innovate! An experimental soil cleanup at the Union Chemical Superfund Site was completed

two years sooner than expected. Innovation extended to the rapid removal/ cleanup actions at Wilner Wood Landfill and federal Superfund sites like Saco Landfill and Eastern Surplus. We are in the final stages of negotiating an agreement with over 2900 responsible parties to remediate the Portland Bangor Waste Oil Site in Wells. The agreement is revolutionary in that the cleanup will be guaranteed for 30 years by an insurance policy, and the responsible parties will be released from liability.

We have a Brownfields grant from EPA to improve our existing program and market contaminated sites for future reuse. The Maine Brownfields Conference, held in June, was enthusiastically attended by over 120 municipal, business, and governmental officials. Since its inception in 1993, the Voluntary Remediation Action Plan (VRAP) program has processed over 150 contaminated sites for cleanup and reuse. We joined with EPA New England in an experiment to remove the Superfund stigma by archiving 38 sites on CERCLIS that no longer need federal scrutiny.

The dirt really "moved" this year, as we completed cleanup at a large number of municipal landfills, underground tank, Superfund, state uncontrolled hazardous waste, federal and private sites. A number of long term underground tanks sites were successfully closed out this year. Emergency removal of hazardous materials at sites in Lincolnville, Auburn, Chelsea, Bowdoin, Gorham, and Addison protected the public from immediate health threats. The Division's Annual Report and the draft Soil Cleanup Guidelines are available on the DEP Homepage. We look forward to a challenging year!

--Mark Hyland, Division Director

SPECIAL PROJECTS AND WORK GROUPS 1998 ACCOMPLISHMENTS

In 1998, Division staff participated in the following special projects/work groups:

- TQM Facilitator Pool
- Member of Quality Council
- Spill Site Tracking System Work Group
- Leaking Underground Storage Tank Process Action Team (LUSTPAC)
- ASTSWMO Base Closure Task Force
- Bureau Safety Advisory Committee
- Public Water Supply Investigation Group
- NEWMOA Innovative Technology Work Group
- Fastrack Contracting Group
- VRAP/ Brownfields Improvement Group

- Pollution Prevention Awards Committee
- Maine Uncontrolled Sites List Update
- Department Training Cadre
- Internal Contracting Work Group
- Bureau Quality Forum
- Lectures to groups at Bowdoin and Colby
- Paper Presented at National Conference on Landfill Remediation

POLICY AND PROCEDURES

During 1998, the Division continued to work on procedures and policy statements including:

- Technical Basis Statement and Background for Soil Cleanup Guidelines Based on Direct Contact
- Draft DEP Direct Contact Soil Guidelines

UNCONTROLLED SITES PROGRAM



The State Uncontrolled Hazardous Substance Sites Law was enacted in 1983, making 1998 the fifteenth anniversary of the program. Since its inception, the program has matured, branched out and evolved. Starting with three persons in 1983, staff has grown to 20. Five program areas, Superfund Pre-Remedial, Superfund Remedial, Federal Facilities, VRAP (or Brownfields) and the State Sites Program were developed as a result of diverse site management issues, funding and regulatory requirements. Staff was divided among these areas. In 1983 the Uncontrolled Sites Program list contained 28 sites, by the end of 1998 the list had grown to 471.

Highlights for 1998 include: the installation of a geosynthetic cover system over an abandoned industrial landfill at the Wilner Wood Product Site in Paris, completion of remedial action at the Seaway Boats Site, Winthrop, conducting remedial investigations at two sites in Lincolnville subsequent to a Department initiated response action, completing site preparation for remedial action at Allen's Garage in North Jay, and initiating an investigation at the Wyman's Autobody Site in Gorham. The Unit continued to work with the responsible parties at the New England Pole Site, Yarmouth to devise a remedy acceptable to the State. Considerable effort on the part of the Unit and the Department of the Attorney General pushed the Portland Bangor Waste Oil, Wells innovative approach to funding a remedial action closer to reality. Finally, in November voters supported a \$1,150,000 bond request.

--Hank Aho, Unit Leader

The following site narratives represent highlights of the 1998 Uncontrolled Site Program:

The World According to Wilner

The former Wilner Wood Products Company manufacturing facility and 6 acre industrial landfill is located in South Paris. The property was developed in the 1940's as a lumber mill and wood shoe heel manufacturing facility. Over the years the facility expanded to include kiln-dried finish lumber, wood and polyurethane shoe heels, glued finish lumber for furniture, and wood flour, until it closed in 1991.

The former manufacturing facility was purchased by the School Administration

District 17 in 1994. The buildings of the former facility were demolished and redeveloped as athletic fields for the expansion of Oxford Hills High School. Another part of the former facility was



redeveloped as a residential neighborhood. SAD 17 athletic fields, former urethane building and industrial landfill at Wilner Wood Products Site.

The urethane building, the last remaining of the former Wilner Wood facility, was sold for commercial use. All that remained was the final closure of the industrial landfill.

Several hazardous substances were used in the process of manufacturing urethane shoe heels. Trichloroethane (TCA) was used as a medium and a solvent during the molding process. Methylene chloride was used to prepare the machinery for mixing resin and isocyanate for the production of polyurethane.

The onsite landfill was developed in a 40-acre wetland, which serves as a discharge area for contaminated groundwater (leachate), surface water runoff from the landfill, and as a discharge point for a perennial stream that flows along the western solid waste boundary. Landfill wastes including wood waste, wood flour, and scrap metal were exposed at the surface.

DEP responded to a complaint about the Site in 1984, and discovered 243 drums containing waste solvents buried in the landfill. Subsequent investigations directed by the Department have documented impacts to groundwater, surface water, and sediment. In 1996, groundwater sampling results documented concentrations of total volatile organic compounds (VOCs) as high as 21,100 ppb. Concentrations of semi-volatile organic compounds and heavy metals in the groundwater were low.

Groundwater contaminant concentrations from 1994 to the present have steadily decreased through processes of natural attenuation.

The DEP directed the preparation of a feasibility study to evaluate remedial alternatives to meet remedial action objectives. The key objective was to reduce leachate generation and surface runoff while allowing natural attenuation of the VOCs to continue.

CMA Engineers, Inc. of Portsmouth, NH (CMA), was contracted by the DEP to evaluate selected landfill cover systems. CMA recommended the innovative use of a geosynthetic clay liner (GCL) as a primary infiltration barrier. Construction of this alternative required waste regrading to maximum slopes of 3.5:1 on the sides and minimum slopes of 7% on the top. Waste materials were covered with a 12-inch layer of buffer sand that provided separation of the waste and allowed gas migration. The reinforced GCL was placed over the buffer sand to limit water infiltration through the waste.



Drainage sand being placed on upper surface of GCL layer at Wilner Wood Products Site.

The GCL, a composite of two layers of geotextile fabric and a layer of bentonite clay, provided a contact barrier with the waste in the unlikely event of differential settlement or severe surface erosion.

On the side slopes twelve (12) inches of drainage sand were placed over the GCL for



Installing the drain at the toe of the landfill recently capped with the geosynthetic clay liner.

enhanced stability. A moisture retention layer was placed to retain soil moisture to improve evapotranspiration by the vegetative layer. This cover system, comprised of low-cost native soils for moisture retention and a GCL for an infiltration barrier, was determined to provide high performance at a lower cost than the applicable geomembrane option. It was also judged to be superior to conventional low permeability soil caps, which can be adversely affected by differential settlement, and freeze/thaw and wetting/desiccation cycles. Geotechnical stability is achieved along the moderate landfill slopes (less than 8%) without addition of costly drainage or reinforcement layers.

The GCL cover system selected for this project provided a relatively short construction time due to simpler construction in comparison to soil or geomembrane barriers, and it reduced the risk of weather related construction delays. DEP contracted K&K Excavation, Inc. to construct the landfill cover system. K & K completed construction ahead of the 90-day schedule specified in the contract. In addition, painstaking care was taken to not adversely disturb the wetlands during

construction. For example, landfill debris was removed by hand from the stream and wetland.

Funding was provided by bond money; the final cost for construction of the cover system was \$609,963.

As a tribute to the clean-up effort at Wilner Wood, the beavers have returned to the wetland.

-- Lynne Cayting

Portland Bangor Waste Oil, Wells (PBWO)

The Uncontrolled Sites Program continues to negotiate with responsible parties for an innovative approach to completing remedial actions at the PBWO Site in Wells. If successful, this approach will have nationwide implications.

PBWO operated a waste oil recycling facility on Burnt Mill Road in Wells from the mid 1950s until 1980. Customers included auto dealers, manufacturing facilities, trucking companies, military installations, state and local governments, and others across northern New England. Waste oil, contaminated water, sludge, and miscellaneous industrial wastes were brought to and processed at the Site. Many of the wastes were spilled or disposed of at the Site.



Sign marking the entrance to Portland Bangor Waste Oil facility on Burnt Mill Road in Wells circa 1980.

Onsite contamination of soil, surface water, and groundwater was found to exceed human health standards. Additionally, volatile organic compounds were detected in two residential wells located within 1/4 mile of the Site. The DEP determined that cleanup of the site was a priority.



Aerial photo of Above Ground Storage Tank Area #1 of PBWO Site in the 1970s showing tanks, tank trucks and Lagoon #1.

The DEP contracted with TechLaw, Inc. in 1993 to aid with organization of the legal case. TechLaw subsequently identified over 2900 responsible parties. To date, the Department notified almost 400 additional responsible parties in an attempt to initiate site cleanup.

The Department hired Gerber/ Jacques Whitford in 1995 to conduct a Remedial Investigation and Feasibility Study at the Site. Fieldwork for the Remedial Investigation started in 1996 and continued through 1998.

Responsible parties formed a technical review group to provide comment on technical issues relating to the Remedial Investigation and Feasibility Study. In 1997, responsible parties hired Woodard and Curran to conduct a Supplemental Remedial Investigation.

The Final Remedial Investigation Report

was completed by Jacques Whitford in 1998. A Supplemental Remedial Investigation Report prepared for the responsible parties by Woodard and Curran was also completed. The State's Contractor, Gerber/ Jacques Whitford, has conducted additional fieldwork and has completed drafts of a Risk Assessment and a Feasibility Study at the Site.

An innovative approach to funding of site remedial action moved forward in 1998. Early in 1998, the responsible parties hired TRC Environmental to prepare a proposal in which TRC would assume, for a fee, responsibility/ liability for site remediation. Under TRC's plan, responsible parties would pay a fee to TRC based on their volumetric contribution to waste at the Site. Once fully funded, TRC and the settling responsible parties would enter a Consent Decree with the State of Maine in which TRC would assume full liability for remediation of the Site, pay past and future state costs, and undertake long term operation and maintenance site responsibilities. Settling responsible parties would be relieved of all future liability. Additionally, natural resource damages and a portion of past costs would be waived by the State for settling responsible parties. However, non-settling parties would still be liable for these costs and be subject to full cost recovery efforts. TRC's remedial work at the Site would be covered by insurance against cost overruns, company failure, and the spread of contamination.

This approach is being watched carefully at the national level because it holds the promise of greatly reducing transaction costs. "Transaction costs" are costs incurred by the responsible parties that produce no actual site remediation. They generally include

And during this time the clock continues to run for legal and technical services. Responsible parties have closure under the model proposed by TRC. They are released from the responsibilities of ongoing remedial activities and associated negotiations. There is a premium to be paid for this service, but once it's paid, the responsible party is released. To many, especially those who have experience with the previous model, this new approach provides an attractive alternative.

Over the course of the year, negotiations progressed between the State, TRC, and the responsible parties. At the end of 1998, most issues were resolved. A settlement is expected after TRC receives funding from the settling responsible parties in early 1999. Following the settlement, site remediation work is expected to begin.

--Clayton Maybee

STATE LEAD SITE CLEANUPS 1998 ACCOMPLISHMENTS

Investigations

Site investigations are conducted to characterize a site; they include such things as identification of contaminant source areas, determination of the nature of contamination, description of probable groundwater flow direction, and identification of potential receptors and potential pathways of offsite migration. A

remedial investigation identifies and fills data gaps so that specific remedial alternatives can be evaluated. The *risk assessment*, performed in conjunction with a remedial investigation, is used to determine threats to human health and the environment posed by hazardous substances at a site, and can be used to establish cleanup goals. The *feasibility study* identifies remedial action alternatives, establishes the process for evaluating an acceptable remedial action and ultimately selects the preferred alternative.

Site/Remedial Investigations took place at the following sites during 1998:

- Eastland Woolen Mills, Corinna
- Portland Bangor Waste Oil, Casco
- Maine Leathers, Dover-Foxcroft
- Green Street, Houlton
- Waterville Gas, Waterville
- Portland Bangor Waste Oil, Wells
- Lewis Wolman Company, Waterville
- Old Bonafide Dump, Winthrop
- Fayscott, Dexter
- Waterville Gas, Waterville
- Sanford Landfill, Sanford
- Miltonia Management, Acton
- Olsky Landfill, Mexico
- Portland Gas Works, Portland
- Arsenic Investigation, Monmouth
- Duck Brook, Bar Harbor
- Wyman's Garage, Gorham
- Millington Enterprises, Thurlow Road, Lincolnville
- Millington Enterprises, Norton Pond, Lincolnville

Feasibility Studies at the following sites were conducted in 1998:

- Maine Leathers, Dover Foxcroft
- PBWO, Wells
- Wilner Wood Products, South Paris
- Sligo Road, North Yarmouth

A *Human Health Risk Assessment* was conducted by the responsible parties for the GE Buildings #10 & #30, Bangor Site. The report was reviewed and approved by the DEP. The DEP contracted for both human and ecological risk assessment studies to be performed at PBWO, Wells.

Remedial Actions

Remedial Actions include remedial design activities as well as the actual implementation of the remedial action. A *remedial design* is a detailed plan for the implementation of the selected remedial alternative. Remedial actions are classified as source control or management of migration (groundwater control) activities. *Removal Actions* are time-critical partial cleanup activities, usually involving the physical removal of source contaminants from a site.

Remedial actions underway in 1998 include:

- GTE-Waldoboro, Waldoboro
- Rumford National Graphics, Belfast
- Farwell Mill, Lisbon
- Tex Tech Industries, North Monmouth
- Allen's Garage, North Jay
- Sanford Municipal Landfill, Sanford
- Seaway Boats, Rt. 202, Winthrop
- Wilner Wood Products, South Paris
- ME Lighthouse Projects, various local

Removal actions implemented in 1998 include the following sites:

- Eastland Woolen Mills, Corinna
- Millington Enterprises, Thurlow Rd., Lincolnville
- Millington Enterprises, Norton Pond, Lincolnville
- Wyman's Garage, Gorham
- Fayscott, Dexter

Operations and Maintenance/Monitoring

Operation and Maintenance (O&M). O & M activities continued at the Miltonia Management Site in Acton which included inspections of the cap and lagoon dikes and sampling of nearby residential wells. O & M activities at the Saco Tannery Pits Superfund Site included site inspection, semiannual groundwater monitoring and sediment sampling. Annual inspection of the enhanced wetland constructed at the Dauphin Site, Bath was performed. Semiannual residential and monitoring well sampling continued at Peterson's Farm Store, Colby, Engineering Industries, Norway and Blackstrap Road, Cumberland.

Residential Well Monitoring. Division staff continued to conduct periodic monitoring of groundwater in residential wells, and where necessary, maintained carbon filters in the vicinity of the following sites:

- Miltonia Management, Acton
- Portland Bangor Waste Oil, Wells
- Blackstrap Road, West Cumberland
- Boggy Brook Voc. Center, Ellsworth
- Robbins Property, Ellsworth
- Peterson's Farm Store, Colby
- Harris Road, Cumberland
- Eastland Woolen Mills, Corinna
- Wyman's Autobody, Gorham

Division staff continued to oversee private parties' monitoring of residential wells in the vicinity of the following sites:

- Tex Tech Industries, N. Monmouth
- GTE Products Company, Waldoboro

Division field staff assisted Technical Services staff with the investigation of numerous public drinking water supplies which had been referred by DHS due to contamination concerns. Sites investigated

by Division field staff included:

- E. Baldwin School, Baldwin
- Gray Water District, Gray
- Morse School, Brooks
- Marine Trade Center, Eastport

Ground Water Monitoring. Division staff continued to conduct periodic sampling of monitoring wells at the following sites:

- Blackstrap Road, W. Cumberland
- Waterboro Patent Corp., Waterboro
- Aroostook State Farm, Presque Isle
- Peterson's Farm Store, Colby
- Engineering Industries, Inc., Norway
- Saco Tannery Pits, Saco
- Allen's Garage, North Jay
- Seaway Boats, Route 202, Winthrop
- Portland Bangor Waste Oil, Casco
- Portland Bangor Waste Oil, Wells
- Hooper Sands Road Site, S. Berwick

Other Technical and Analytical Data. Division staff continued to review technical and analytical data submitted by other parties at the following sites:

- Dauphin Landfill, Bath
- Farwell Mill, Lisbon
- GE Buildings #10 & #30, Bangor
- GTE Products Corporation, Waldoboro
- N. Berwick Mun. Garage, N. Berwick
- Rumford National Graphics, Belfast
- Tex Tech Industries, North Monmouth
- New England Pole, Yarmouth
- Wolman Steel, Waterville
- Old Bonafide Dump, Winthrop

Other Related Activities

Negotiations with responsible parties were held for Portland Bangor Waste Oil in Wells and Fayscott, Dexter.

Meetings with municipal officials, the public and/or concerned citizens. Meetings

were held with/or in Corinna, South Paris, Gorham, Lincolnville, Dover-Foxcroft, and Wells.

Agreements: An agreement was finalized with Bath Iron Works regarding the Dauphin Disposal Facility in Bath.

Contract work was performed in regard to Wilner Wood Products, South Paris; Portland Bangor Waste Oil, Wells; Seaway Boats, Winthrop; Wyman's Autobody, Gorham; Allen's Garage, North Jay and Millington Enterprises, Lincolnville.

Cost recovery funds were received from responsible parties for North Berwick Municipal Garage, Rumford National Graphics of Belfast, Wilner Wood Products in South Paris, GE Buildings #10 & #30 in Bangor, D&S Corporation, Bangor, Dauphin Landfill, Bath and Fayscott Company in Dexter. Cost recovery efforts continue for Central Chemical Company in Greene and Southern Maine Finishing in Waterboro.

Requests for Proposals were prepared and distributed for Allen's Garage, North Jay and Wilner Wood Products, Paris.

Activity with federal agency. National Oceanic and Atmospheric Administration (NOAA) officials, in cooperation with program staff, worked to develop response action plan for the Portland Gas Works Site, Portland. DEP is working with USEPA to coordinate a non-time-critical removal action and to transition some of the investigative activities at the Eastland Woolen Mill, Corinna from State to Federal oversight as the Site approaches Superfund listing.

PETROLEUM HYDROCARBON REMEDIATION PROGRAM

Responsibility for the implementation of Maine's Petroleum Hydrocarbon (Oil) Remediation Program is shared among four Divisions, which operate within the Remediation and Waste Management Bureau. The Remedial Planning Unit (RPU) is staffed by three (3) Environmental Specialists who have diverse job functions. Most importantly, we manage DEP led cleanup efforts at the State's highest priority and most complex oil contamination cases. Other responsibilities include management and contracting oversight of remedial services, involvement with Bureau wide procurement efforts, and implementation of the FASTRACK Consultants List. Information exchange, computerized tracking system development, and public education and outreach are additional tasks that are performed by RPU staff.

During 1998 the RPU has managed the successful completion of twelve (12) high priority petroleum hydrocarbon contamination cases. We are currently managing remedial efforts at 38 contaminated sites that are located throughout the State. RPU Project Managers, with the assistance of other Bureau staff including Engineers, Geologists, and Chemists to make up the DEP team, have worked on fifty (50) remediation projects. Sites range in complexity from soil contamination and impacted residential water supplies, to regional contamination issues where entire villages are suffering from contaminated groundwater, and overstressed aquifers. During 1998, RPU managers have hired many private sector vendors, with a total estimated contract dollar value of \$1.1 million. We deal with fuel oil, diesel, gasoline, MTBE, and other petroleum contamination. We continue to increase our reliance upon the DEP's Technical Services Division staff and the members of the FASTRACK Consulting community, as well as directly managing professional and contracting trades groups. --Tom Benn, Unit Leader

The Bureau's Division of Response Services typically is the initial DEP responder to the spill site and most sites are closed without referral. The RPU receives the high-priority, more complex sites for assessment and remediation. Other related activities undertaken by the Petroleum Hydrocarbon Remediation Program include the management of the DEP's Point of Entry (POE) water treatment and filtration program. This program provides protection by monitoring approximately 1000 drinking water supply wells located throughout the State. A prioritization program for oil contaminated sites, the Investigation Work Status Program, continued work with a computerized tracking system, and data exchange efforts are ongoing RPU projects.

Below is a representative sampling of the RPU's 1998's remedial activities. Each project has had a unique hydrogeological investigation. Individual remedial actions were determined by the DEP team based on

its interpretation of the hydrological and environmental data. Please note how well we accomplished objectives that were established in last year's annual report. We have included our clean-up schedule for 1999. These brief project descriptions document the diverse and typical efforts that RPU managers use to protect human health and the environment, while conserving resources.

Tomisak Property, Addison

1998 accomplishments: Drilled and hooked up replacement wells. Removed carbon filters.

1999 Objectives: Will close the case after three months. Quarterly Monitoring.

Crystal Springs Site, Auburn

1998 accomplishments: Closed the case after Quarterly Monitoring for the year. Replaced 3 wells. Removed carbon filters.

Cormier Site, Augusta

1998 accomplishments: Closed case after Quarterly Monitoring. No MTBE. Removed carbon filter.

VanHorn Site, Augusta

1998 accomplishments: Closed case after successful replacement of contaminated well and Quarterly Monitoring. No Benzene.

Consumers Fuel Company Site, Belfast

1998 accomplishments: Continued O & M of remediation system, improved effectiveness of product recovery, and monitored neighboring residential property.

1999 objective: Close Site when remedial objective is met.

Groveville Service Center, Buxton

1998 accomplishments: Continued successful operation of SVE/sparge remediation system. Contract for O & M expires July 1, 1999.

1999 objectives: Run SVC/sparge system until contract expires and then dismantle system and monitor for one year thereafter.

Troy Hill Site, Buxton

1998 accomplishments: Defined foot print of the contaminated drinking water wells through comprehensive sampling rounds, and installed 20 GAC Filters. Contracted Summit Environmental for hydrogeological investigation of Site to determine source of contamination and groundwater flow patterns, which was completed.

1999 objectives: Continue monitoring of Site and conduct soil removal at contaminated source. Conduct additional remedial actions as practical.

Kennebec Quik Stop, Chelsea

1998 accomplishments: Identified extent of contamination, sampled area residents, and drilled three private water supply replacements.

1999 objectives: Monitor wells for nine months, then close Site.

East Pittston

1998 accomplishments: Operated groundwater remediation system to protect replacement water supply from contamination. Dismantled remedial system.

1999 objectives: Abandon wells and close Site.

East Madison Store

1998 accomplishments: Identified extent of

contamination. Removed contaminated soil, provided GAC filter system for store, drilled replacement drinking water supply and monitored.

1999 objectives: Continue water quality monitoring for two quarters and close Site.

Friendship & Cushman & Sandblom

1998 accomplishments: Monitored site conditions, installed GAC filters and monitored system.

1999 objectives: Provide GAC and close Site.

Pete's Garage, Fryeburg

1998 accomplishments: Continued groundwater monitoring of the Site. Replaced six private drinking water supplies.

1999 objectives: Replace the last remaining drinking water supply and close the Site.

Pelkie's Store, Fryeburg

1998 accomplishments: Monitored site conditions and closed the Site.

Lowell Cove Remediation, Harpswell

1998 accomplishments: Defined footprint of contaminated drinking water wells in the Lowell Cove vicinity. Installed a total of 52 GAC filters to date. Removed 200 tons of mildly contaminated (gasoline) soil from LUST site. Replaced approximately 46 home heating fuel tanks at risk or leaking.

Bessey et al., Hinkley

1998 accomplishments: Monitored replacement water supply quarterly. Await closure.

Moosebec & Jonesport-By-The-Sea, Jonesport

1998 accomplishments: Replaced three drinking water supplies and removed GAC filter system.

1999 objectives: Replace one private well and close the Site.

Twin Bridge Market & Cooper, Leeds

1998 accomplishments: Closed Site.

Lee Village Remediation, Lee

1998 accomplishments: Shut down and dismantled remediation system.

1999 objectives: Monitor residential water supplies for one year. Close Site.

Wing et al., New Gloucester

1998 accomplishments: Purchased POE filter system and closed Site.

Koobs Garage et al., Oquossoc

1998 accomplishments: Continued residential sampling, conducted public informational meetings, monitored site contamination and worked with Water District on long term implementation of replacement drinking water utility.

1999 objectives: Continue meetings with Water District Trustees and local residents.

Canton Residence, Phillips

1998 accomplishments: Sampled new residential well and recovery well.

1999 objective: Take one more sample, abandon the recovery well and close the Site.

Anderson & Sewall Remediation, Richmond

1998 accomplishments: Monitored residential wells for four quarters and added one GAC filter.

1999 objective: Determine the number of residents who are interested in waterline extension. Decide to build or provide permanent POE treatment.

Searsmont Village LUST, Searsmont

1998 accomplishments: Completed construction of Replacement Drinking Water Utility for the contaminated and at-risk residents in the village. Removed GAC filter systems from all parties.

1999 objective: Complete negotiations with Downtown Searsmont Aqua Association on operational subsidy. Close Site.

S & M Cash Market, South China

1998 accomplishments: Continued to operate groundwater treatment system. Improved system performance, removed three residential GAC systems and sampled residential and product recovery wells.

1999 objective: Remove remaining GAC filters and operate groundwater treatment system.

Long Cove, St. George

1998 accomplishments: Sampled neighborhood

and installed eight GAC filter systems on contaminated residences.

1999 objective: Evaluate remedial options for the Site.

Dick's Market Remediation, Surry

1998 accomplishments: Connected new potable replacement well to residence.

1999 objective: Complete easement paperwork for waterline with town and close Site.

Village Remediation, Tenants Harbor

1998 accomplishments: Sampled village twice, provided GAC filtration on homes found to be impacted, and located and tested replacement drinking water supply wells. Operated several groundwater treatment systems in village.

1999 objective: Continue village monitoring and GAC installations. Pump Test the replacement water supply, design a municipal drinking water system for the village, purchase municipal well locations and hire a construction firm to build the replacement system.

Hilltop Store, Thorndike

1998 accomplishments: Conducted hydrogeological investigations, replaced one private drinking water supply and monitored site conditions.

1999 objectives: Purchase POE filter system for the store, monitor its effectiveness and close the Site.

Murray Oil Remediation, Turner

1998 accomplishment: Nothing done in 1998.

1999 objectives: Revisit Site for the purpose of close-out and referral.

Whitefield Elementary School Remediation

1998 accomplishments: Operated remediation system, hired hydrogeological consultant and drilled site exploration wells for water supply replacement.

1999 objective: Replace the schools drinking water supply, remove GAC filters and close Site.

Greeley Residence Site, West Gardiner

1998 accomplishment: Closed Site.

FEDERAL FACILITIES AND SUPERFUND UNIT

The Federal Facilities and Superfund Unit and our federal partners in the U.S. Environmental Protection Agency and the Department of Defense continue to identify, investigate and address unacceptable levels of contamination as a result of past practices. As a result of efforts in 1998, federal funding was extended for both military and eligible National Priorities List Sites. The vacant Toxicologist position was filled, greatly increasing our responsiveness and remedial decision making.

-- Denise Messier, Unit Leader

Highlights for Selected sites are as follows:

Defense Fuel Supply Center, Harpswell

The Unit is working with the Defense Logistics Agency to address this former fuel storage and transfer facility which is destined to be transferred to the Town of Harpswell in 1999. In the Fall of 1998, approximately 53,000 tons of soil impacted with JP5 jet fuel and marine diesel fuel was successfully treated onsite using "Low Temperature Thermal Desorption" technology.



Loading contaminated soil into feeding hopper of Low Temperature Thermal Desorption Unit.



View of entire apparatus of Low Temperature Thermal Desorption unit.

By the end of the year, several buildings were demolished and the debris taken for offsite disposal; lead and asbestos were abated in some remaining buildings. A new potable water supply was developed on site. An agreement outlining future responsibilities of the Defense Logistics Agency, DEP and the Town has been drafted. The agreement should be finalized in 1999.

Freshly treated soil transported by conveyer belt to soil pile to be redistributed on the Site.



Saco Municipal Landfill, Saco

The U.S. Environmental Protection Agency (EPA) and DEP are directing the closure and remediation of this site which served as the municipal landfill from 1960 until the mid 1980's.

During 1998, the final landfill cap for Areas 3 and 4 was completed, arsenic contaminated sediments were removed from the banks of Sandy Brook, a leachate collection and treatment system was installed for Area 2, and repairs to the Area 2 cap were completed. Work on the Remedial Investigation and Feasibility Study continued.

Loring Air Force Base, Limestone

The Site served as a Strategic Air Command base from the late 1940s to 1994. DEP is working with the Air Force Base Closure Agency, and EPA to convert the base to other commercial-industrial uses including aviation, and as a wildlife refuge.

The design for the remediation and restoration of the East Branch of Greenlaw Brook won the 1998 Design of the Year Award from the Consulting Engineers of Maine. Phase 2 of the soil and sediment removal for the stream remediation project was completed in 1998.



Stream bed restoration of the East Branch of the Greenlaw Brook after removal of contaminated sediment.

Work continued on the underground storage tank corrective action program. Drums and contaminated soil were removed from the quarry disposal site and contaminated soils



Drum removal operations at the quarry disposal site at the former Loring Air Force Base.

were placed in Landfill 3. The significant data collection, reporting, document review and planning effort associated with a project of this size continued.

Naval Air Station, Brunswick

During 1998, the overall restoration program at Brunswick Naval Air Station (BNAS) remained on track and on schedule. The Site 2 Record of Decision was signed. The Long Term Monitoring Plan (LTMP) for Sites 1 and 3 and the Eastern Plume is progressing. Additional "direct push" explorations have been performed and new monitoring wells have been installed as part of this revised LTMP. The draft Remedial Action Plan for Site 9 is close to being finalized.

Portsmouth Naval Shipyard, Kittery

In September, sophisticated metal detection devices were brought to the shipyard to search for waste drums in the Jamaica Island Landfill. The Navy, EPA and DEP continued to work on risk assessment of contamination on the surrounding tidal environment, and differentiating among multiple sources of contamination in the estuary. A proposed plan for interim monitoring of the "offshore"

environment was prepared and presented to the public for comment.

Naval Computer and Telecommunications Station, Cutler

This active Navy installation is a vital link to forces at sea, including submarines. Several areas of concern have been identified.



North Array antenna tower and center weight tower (bottom center).

DEP worked with the Navy in 1998 to minimize releases of contaminants resulting from surface preparation for repainting of the antenna towers.

Former Fuel Farm, Long Island

A military fuel supply center operated on the island from the World War II era until the 1960s. Subsequently, a commercial fuel terminal took over the facility. The future uses of the former terminal include open space, municipal offices and residential property. Remediation efforts have involved the Army Corps of Engineers and private parties.

The Army Corps completed a significant

amount of work between July and December, including demolition of large concrete underground storage tanks, the removal of approximately 10,000 tons of petroleum contaminated soil, and the demolition of structures deemed to be unsafe.



Excavation of contaminated soil for removal in the location of the former Clarifier Building at the former Fuel Farm, Long Island. (photo by Roy F. Weston, Inc.)

Empire Knight, Near Isle of Shoals

Division staff assisted the Bureau of Land and Water Quality with evaluation of potential damage to the marine environment near the World War II era Empire Knight shipwreck. In September 1998, caged mussels were deployed around the shipwreck to monitor for evidence of mercury releases to the water. Mussels were deployed by DEP staff from the U.S. Coast Guard buoy tender *Marcus Hanna*.



Coast Guard personnel preparing for deployment of mussel cages from the deck of the USCG buoy tender *Marcus Hanna*.

Mussels were retrieved approximately two months later. At the same time, sediments were collected from locations along transects radiating from the Site. Mussel tissue and sediment samples have been analyzed for mercury. These results are currently being evaluated.

Winthrop Landfill, Winthrop

The operation of the Groundwater Extraction & Treatment System (GWETS) continued during 1998. Modifications to the Vapor Extraction System (VES) were completed and the system turned back on. Cap repairs were conducted to fix cap settlement and drainage problem areas. Annual samples collected from Annabessacook Lake indicated that no restrictions on uses of the lake are needed because of the landfill. The past and present cleanup activities at the Site are protective of human health.



View of Annabessacook Lake near to the Winthrop Landfill with monitoring well in center foreground.

Union Chemical Co., South Hope

During 1998, soil sampling was conducted in the area being treated by soil vapor extraction (SVE) technology. An evaluation of the soil sampling results concluded that treatment area soils have met the soil cleanup levels for this site. The SVE activities were completed in approximately two (2) years of operation (roughly three years ahead of the allotted five years). The GWETS portion of the cleanup activities continues to operate.

Aerial view of the Union Chemical Company Site in 1996 showing the combined soil vapor extraction and groundwater extraction and treatment system.



As of December 1998, the treatment system (VES & GWETS) had removed a total of 9,560 pounds of volatile organic compounds (VOCs) from the soil and groundwater beneath the Site.

McKin Site, Gray

The mediation process to determine a feasible remedial solution for the Site continued. In September, the DEP staff and a member from the Friends of the Royal River group surveyed approximately twelve (12) miles of the Royal River (from the Depot Road crossing in Gray to the East Elm Street crossing in Yarmouth) to document “uses” of the river.



Boat dock, house and barn documenting “human use” on the shore of the Royal River.

Eastern Surplus, Meddybemps

The collection of site data for the Remedial Investigation/ Feasibility Study (RI/FS) reports continued in 1998. The U.S. Fish & Wildlife Service released their report on the fish and mussels collected from Meddybemps Lake, the Dennys River and the East Machias River. Removal and disposal of the debris and structure located

at the Site occurred in the late summer/fall of 1998. The removal of VOC and polychlorinated biphenyl (PCB) contaminated soils was postponed and is scheduled to occur in 1999. A Consent Decree between the DEP, EPA and the potentially responsible parties (PRPs) was drafted and finalized in 1998.



View of the Eastern Surplus Site before (top) and after (bottom) the removal and disposal of junk and other debris and an onsite structure.

West Site, How's Corner

This former Portland Bangor Waste Oil Company facility was used for waste oil collection and storage from industrial, municipal, military and commercial clients from 1965 through 1980. Contaminants from the facility migrated to a number of private drinking water wells in the area. Source area soils have

been removed. A water district was developed to supply water to residences with contaminated well water or with wells threatened by contamination.

EPA has proceeded with legal action against PRPs. Negotiations to finalize a subsidy agreement have continued with the Plymouth Water District.

Other Projects Assigned to the Federal Facilities and Superfund Unit:

- Army Guard Training Site, Auburn
- F. O'Connor, Augusta
- Nike LO-58, Caribou
- Nike LO-13, Caswell
- Loring Air Force Base Commo Annex, Perham
- Loring Air Force Base Laundry Annex, Presque Isle
- Dow Pines Recreation Area, Great Pond
- Former Air Force Radar Tracking Station, Buck's Harbor
- Peaks Island Military Reservation, Peak's Island
- Army Reserve Training Site, Caswell
- US Army Reserve Center, Dexter
- Maine Target Bombing Area, Georgetown
- Air Force Radar Tracking Facility, Glenburn
- Merriam Point Fire Control Station, Great Chebeague Island
- Gerrish Island Fire Control Station, Kittery Fort Popham, Phippsburg
- Great Diamond Island, Portland
- Regional Airport, Princeton

- Defense Fuel Support Point Pipeline, Searsport to Bangor
- Fort Preble, South Portland

Projects Referred

- Saco Municipal Landfill, Saco
- Mead, Rumford
- Portsmouth Naval Shipyard, Kittery
- Fayscott, Dexter
- Holtrachem, Orrington
- Portland Bangor Waste Oil, Wells
- Empire Knight Shipwreck, Off Isle of Shoals
- Pioneer Plastics, Auburn
- West Site, How's Corner
- Former Air Force Tracking Facility, Buck's Harbor
- Loring Air Force Base, Limestone
- New England Pole, North Yarmouth
- Saco Defense, Saco
- McKin Site, Gray
- Eastern Surplus, Meddybemps
- F. O'Connor, Augusta
- Remedial Action Guidelines for Soils
- Sediment Guidelines
- Mercury
- Indoor Air Guidelines
- Maximum Exposure Guidelines

SITE ASSESSMENT & SUPPORT SERVICES UNIT

The Site Assessment & Support Services Unit administers the Voluntary Response Action Plan (VRAP) Program, the State Brownfields Program, the federal Site Assessment Program for EPA's CERCLA (the federal list of hazardous waste sites) sites, and conducts initial investigations, sampling, removal actions and routine monitoring for sites within the division's different programs. During 1998, the unit conducted a number of site assessment activities and presented education/outreach opportunities through our two EPA grants-the Core Program Cooperative Agreement (Voluntary Cleanup Portion) and the Multi-Site Cooperative Agreement II (MSCA II). The unit planned and presented the Maine Brownfields Conference on June 11, 1998, with funds from the Core Grant, and completed CERCLA assessments, Brownfields Site Assessments and Site Discovery Projects through our MSCA II grant.

Unit staff submitted 16 site assessment reports to EPA in 1998: 1 Site Inspection, 6 Site Inspection Prioritizations, 1 Combined Preliminary Assessment – Site Inspection, 4 Site Discovery Reports and 4 Brownfields Site Assessments. Additionally, through the now completed EPA Archive Pilot, 38 sites were removed from the active CERCLA list, following the recommendations of the unit.

Initial investigations were conducted at nine new sites. The unit also completed state-lead removal actions at sites in Auburn, Bowdoin, and Chelsea, and provided oversight of a number of private-lead sites. Routine sampling (quarterly or semi-annual) was completed at 21 sites to monitor impacts to drinking water supplies.

--Nick Hodgkins, Unit Leader

In 1998, the VRAP Program added 54 new sites, to bring the program total to 152 sites. Of these 152 sites, 46 were remediated and/or resolved to the Department's satisfaction in 1998, to bring the total number of sites resolved to 119 since the inception of the program in December 1993. Remedial actions were completed at an additional 4 sites, with final resolution anticipated during early 1999. Sixteen sites currently have remedial actions in progress. The other thirteen sites are awaiting further investigation and/or the development of remedial plans. The VRAP Program received \$26,207 in fees in 1998.

The VRAP Program, along with other participating state agencies and organizations, planned and presented the Maine Brownfields Conference on June 11, 1998. Over 120 attendees heard presenters from government agencies, law firms, environmental consulting firms, municipalities and the banking industry give their perspectives on Brownfields.

The VRAP/Brownfields Improvement Group provided recommendations for improvements/

enhancements of the VRAP and Brownfields Programs. Presentations were made to both the Bureau of Remediation & Waste Management managers and members of the Commissioner's Senior Management Team. The recommendations are being evaluated and implemented, as appropriate.

Some specific site highlights of 1998 include:

Webber-Kensington-Portland

The Webber-Kensington project is located at the end of Kensington Street, Portland, Maine, bordering Casco Bay. The Site was the location of a former oil-terminal facility. The Site entered the VRAP Program in August 1998. Investigations identified petroleum contamination of subsurface soils in an earthen-dike area. Contaminated soils were removed to meet the Department's remedial objectives for the property.

The groundwork has begun for redevelopment as a marina with a boat storage facility.

Graham Station-Veazie

The Graham Station Facility in Veazie was the location of a former oil-fired electricity generation plant. The facility itself occupies only a small portion of the 156-acre parcel of property. The Casco Bay Energy Company (CBE) purchased approximately 29.5 acres of the property to construct a new 520-megawatt electrical generation facility, referred to as Maine Independence Station.

The project entered the VRAP Program in early 1998. The Bangor Hydroelectric Company (Bangor-Hydro) retained ownership of the Graham Station Facility buildings, and still uses the property as an electrical substation, a staging area for electrical maintenance, and a storage area for supplies and equipment. The portion of the property purchased by CBE was the location of underground and aboveground petroleum storage tanks, which held fuel for the Graham Station Facility when it operated as an electricity generation plant.

During the summer and early fall of 1998, approximately 11,500 tons of contaminated soil were removed from the Site and transported to approved asphalt batch-plants for recycling.



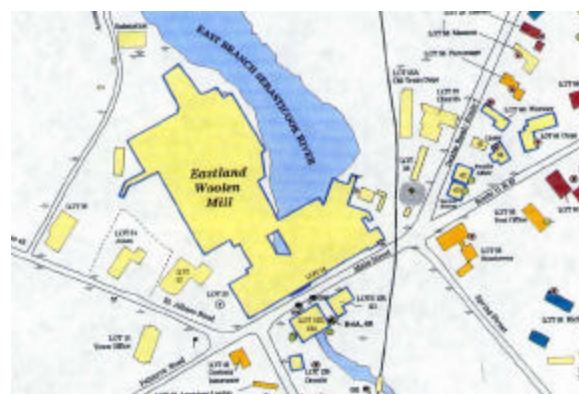
Soil excavation west of former 340,000 gallon above ground storage tank at the Graham Station Facility in Veazie.

Maine Independence Station is currently

under construction, and when completed will be a state of the art electricity generation facility for years to come.

Eastland Woolen Mill – Corinna

The Eastland Woolen Mill is an abandoned wool fabric manufacturing facility located on Main Street in Corinna. Operation of the mill led to contaminated drinking water wells at 14 locations in downtown Corinna, as well as the surface water and sediment in the East Branch of the Sebasticook River.



Site map of the Eastland Woolen Mill in Corinna showing the East Branch of the Sebasticook River flowing through the mill.

In early 1998, the DEP, EPA and the Town of Corinna decided to pursue listing the Site on the National Priorities List (i.e. a Superfund Site). During the summer of 1998, DEP personnel collected samples from residential water wells, and from sediments and surface water in the river. The information gathered was incorporated into a Hazard Ranking System Package (HRS) and submitted to EPA. Currently, the State is awaiting comments from EPA.

At the same time that DEP staff were preparing the HRS, EPA staff and their contractors began work on an investigation. EPA staff concentrated their efforts on contamination in and under the building to determine if a non-time critical removal action was warranted.

Site Discovery Project

Through the Site Discovery Project, the unit completed assessments at five new sites utilizing EPA funding. Three of these sites were found to be impacted by hazardous substances at levels requiring additional investigative and remedial activities. An example of a site investigated through the Site Discovery Project is the Leeds Metal Site in Leeds.

Leeds Metal was the location of a scrap metal recovery facility. In response to concerns regarding the discharge of hazardous substances, the Department conducted a site assessment through the Site Discovery Project. Results from this site assessment indicated that on site soils have

been impacted by PCBs, metals, and petroleum contamination. The current



Former Leeds Metal Site in Leeds showing salvage operations area containing an abandoned well and cement building.

owner is now working with the Department to identify additional potentially responsible parties, and to address contamination at the Site.

LANDFILL CLOSURE & REMEDIATION PROGRAM

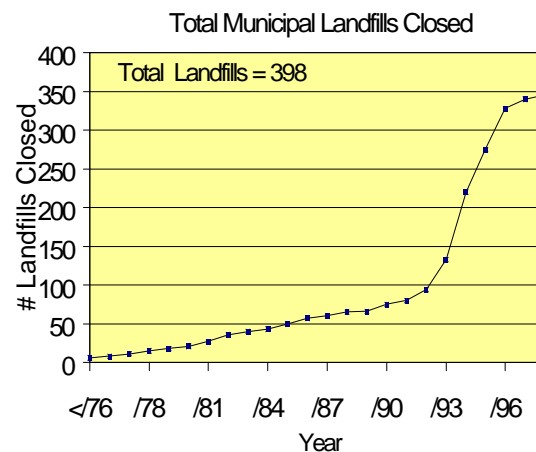
The Landfill Closure and Remediation Program has continued in its efforts to close all unlicensed municipal landfills. The Program received additional bond funding in 1998. A \$4.5 million bond originally proposed for November 1997 was delayed for voter consideration until June 1998. This money was approved by voters in June 1998 and is available to cover state reimbursement obligations for 1998 site closures.

Of the approximately 398 municipal landfills identified in the State, a total of 346 landfill sites have been officially closed, as of December 31, 1998. One is partly closed, and 51 remain to be closed. During the 1998 calendar year, a total of 6 landfill sites were closed. Four additional sites reached substantial completion of closure in 1998, but have not yet certified the completion of the project. Additional sites that closed in previous years were officially certified during 1998. Based on these figures, approximately 87% of the State's municipal landfills have been successfully closed under this program.

The program has identified approximately 9 sites that are expected to complete final closure in 1999. Four additional sites are expected to certify closure work previously completed. Any remaining sites are expected to be either licensed operating sites not scheduled for closure until after 2000, or non compliance sites that did not complete a specified site closure under DEP supervision.

The Landfill Closure Program is entering the final year of the cost sharing process. Beginning on January 1, 2000 landfill closure activities will be ineligible for state cost sharing.

-- Ted Wolfe, Unit Leader



Policy Changes:

As a result of legislation in 1997, the program began making preparations in 1998 for the approaching end of cost sharing activities. Municipalities received a two-year extension on eligible closure activities. Municipalities must close their landfill sites by January 1, 2000 in order to receive reimbursement support. However, municipalities that did not submit a closure agreement in 1994 or who do not qualify for a Department Order must receive a reduced state cost share.

With the expected phase-out of the reimbursement process and the declining number of landfills expected to close, the Landfill Closure and Remediation Program is expected to cease landfill closure activities on January 1, 2000. Personnel will be on hand to close out administration of the reimbursement program, and to assess remedial activities that have become an issue.

Funding Status:

Maine voters have approved 9 of 10 landfill closure bonds totaling \$72.5 million. As of December 31, 1998, \$68 million in bond funds have been made available to the DEP. An additional \$3 million in general funds were also made available to the program in 1998.

The \$71 million in bond and general funds made available to date have been allocated as follows:

- \$58.1 million in direct payments to over 310 municipalities as grants or reimbursements for closure work;
- \$12.7 million in payments to towns or state consultants for landfill evaluations and planning work;

- \$200,000 remains to be spent, but is committed to on-going town reimbursements, consultant contracts, and encumbered grants;
- \$4.5 million remains to be sold as bond anticipation notes, but is committed to town reimbursements for 1998 closure work.

An additional bond for \$4 million is under consideration for legislature and voter approval for November 1999. If approved, these funds will be applied towards 1999 closure activities.

Reimbursement/Closure Status:

As of December 31, 1998, of the approximately 398 municipal landfills officially identified in the State, a total of 346 landfill sites have been closed, one is partly closed, and 51 remain to be closed. However, several of these sites will remain active beyond 2000. During the 1998 calendar year, 6 landfill sites were closed. Several other sites that actually completed closure work in previous years were also certified during this time period. Four additional sites substantially completed closure, but have not submitted required certification information.

Completed closures credited in 1998 included the municipalities of Hermon, South Portland, Old Orchard Beach (stump dump), Saco, Chesterville and Bowerbank. Sites that reached substantial closure but have not certified the completion of the project include RWS, Waterville, Lisbon and Westbrook.

The average cost per acre for landfill closures in 1998 was approximately \$50,000/acre. Actual costs varied between \$40,000/acre for minimal clay covers to \$120,000+/acre for composite cap covers.

Historical closure costs reported by all municipalities as of December 31, 1998 total approximately \$94.4 million. The state share of municipal closure expenses as of December 31, 1998 total approximately \$70.8 million. In most cases the State has paid 75% of eligible expenses. Twenty-two towns received \$4 million in direct reimbursement payments in calendar year 1998 for their landfill closures. An additional 6 municipalities received approximately \$2.9 million in grant funding towards 1998 closure activities.

The Landfill Closure and Remediation Program reviewed old municipal grant accounts established by towns for their landfill closure projects. This review has resulted in the return of \$117,500 in unspent grant funds. These returned funds will be applied to reimbursements of other municipal landfill closures that occurred in 1998.

Total 1999 closure costs are unknown but are estimated to average \$60,000/acre to \$75,000/acre due to a number of moderate to higher risk landfills needing higher levels of closure. The minimum cost to the State of capping all 398 landfills in the State is now estimated at approximately \$86.7 million. Future remediation, additional evaluation expenses, and unanticipated reimbursement requests may occur and may add to the total closure costs, but cannot be realistically estimated at this time.

Of the approximately 398 landfills identified by this program, some will not close and thereby not benefit from the cost share program. It is estimated that approximately 11 sites will continue to operate until 2000-2015. An additional 28 municipalities may not close during the specified time period of the program and may subsequently be

classified as non-complying sites. Consequently, actual additional costs to the State for this program may actually approach \$4 million.

Selected Project Highlights

South Portland Landfill: The City completed the Phase II closure of their 28 acre landfill during 1998. There is also an additional 12-acre outlying waste area for which level of closure is still being determined. Previous explorations by the Department and City determined that, although industrial wastes were likely deposited at the Site, no high risks to public health or the environment were found. Based upon these findings, a recommendation was made for placement of a Regulation level earthen barrier cover over the regraded wastes. The phase III closure of the outlying area will take place in 1999.

Smooth drum sealing following sheepfoot rolling of second lift of barrier soil layer at South Portland Landfill.



Westbrook Landfill: The City substantially completed Phase II construction work at the 23 acre Sandy Hill municipal landfill. Based upon earlier findings that the mixed municipal/industrial wastes were not posing any high risks to public health and the environment, the Department required a Regulation level clay barrier for the project. Closure of a separate 12-acre demolition landfill at will be completed in 1999.

Lisbon Landfill: The town of Lisbon has substantially completed the closure work planned for their 15-acre municipal landfill. A Department Order and several grant agreement awards were developed to provide state cost share assistance. This \$1.1 million project was completed between June and September. Two separate landfill cell areas were closed, one area with a soil barrier layer, the other with a composite system layer. The town is completing the documentation of the construction project, and performing final changes to their post-closure monitoring and maintenance plan.

Post-Closure Issues

With the final closing of a majority of Maine's municipal solid waste landfills, more emphasis is now being placed by Closure Program staff on post-closure inspection, maintenance, repairs, monitoring and data tracking.

Department staff completed approximately 27 post-closure inspections in 1998. These inspections were often accompanied by municipal officials and were followed by staff letter summaries, requirements for monitoring and/or recommendations for maintenance and repairs.

Post-closure remedial investigations were required by Department staff at the Kingfield, Freeport, Mexico and Dover-Foxcroft landfills. Inspections or other reports revealed slope instability or severe leachate breakout issues at these locations. Repairs at Dover were completed in 1998. Investigations are anticipated to continue, which will result in recommendations for actions in 1999 at the other two sites. Assessment of repairs at Mexico are pending.

As a result of the inspections, additional hydrogeological investigations have been recommended for the closed Lamoine and Buxton landfills, to be completed in 1999.

Department-lead investigations are also occurring at the closed Winter Harbor, Corinna and Mechanic Falls landfills, as noted below. A number of other closed landfills are also being closely evaluated for public health and environmental risks. This is particularly true at locations where adjacent residential and/or commercial development continues after the initial closure.

Winter Harbor landfill: Department staff completed post-closure monitoring in the vicinity of the closed landfill, which revealed VOC contamination at or above action levels in four residential wells. Filter systems were provided at 90% state cost, and a site assessment contract with GZA GeoEnvironmental, Inc. is pending. In addition to the affected and at-risk residential wells, there is concern for a new public water supply well located 2,000 feet downgradient from the Site. Use of the landfill by industry and/or government facilities is suspected.

Corinna landfill: Department staff continue to monitor both landfill and area residential wells at this closed, high-risk landfill site. Closed with a composite cover system in 1996, the monitoring wells are still indicating high levels of VOC contamination, probably of industrial origin.

A number of the residential wells have shown low, intermittent levels of organic compounds. There is also concern for continued residential growth in the area.

Mechanic Falls Town Landfill: The Department continues with Phase II hydrogeological investigations through contract with HLA, Inc. Though closed with a "Reduced Procedure" cover, the Site is thought to possibly pose risks to several nearby water supply wells. Several of these have had intermittent, low levels of VOC's

recorded in the sampling results. Also, since the landfill is adjacent to the *Maine Wood Treaters Site*, it has been implicated

by the Site owner as a possible contributor to overall ground water contamination at that Site. Information gained from the landfill investigations will prove useful to both projects.

Members of the 1998 Division of Remediation

Division Director
Mark Hyland

Uncontrolled State Sites Unit

Hank Aho Unit Leader
Lynne Cayting
Kathy Niziolek
Wayne Paradis
Randy King
Clayton Maybee

Site Assessment & Support Services Unit

Nick Hodgkins Unit Leader
Jean Firth
Denise Fournier
Gordon Fuller
Brian Beneski

Federal Facilities and Superfund Unit

Denise Messier Unit Leader
Naji Akladiss
Claudia Sait
Katie Zeeman
Wilkes Harper
Rebecca Hewett
Iver McLeod

Landfill Closure & Remediation Unit

Ted Wolfe Unit Leader
Bob Birk
Roy Krout

Petroleum Hydrocarbon Remediation Unit

Tom Benn Unit Leader
Chris Swain
Jim Pray



Each Site Investigation is unique.....